CLAIMS

1.   An operation log cooperation utilizing device which allows a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said operation log
5   cooperation utilizing device comprising:

a device operation detection unit operable to detect a user's operation on a device;

an operation log accumulation management unit operable to accumulate and manage the detected operation along with a
10   predetermined attribute as an operation log;

a current operation log transmission unit operable to transmit the current operation log as a current operation log to another device, the current operation log being accumulated when a user's operation is detected;

15   a current operation log reception unit operable to receive the current operation log transmitted from another device;

an associated operation log extraction unit operable to extract an operation log as an associated operation log from said operation log accumulation management unit, the operation log
20   being in a predetermined relation to the received current operation log;

an associated operation log transmission unit operable to transmit the extracted associated operation log to another device;

an associated operation log reception unit operable to receive
25   the associated operation log transmitted from another device;

an associated operation log interpretation unit operable to interpret the received associated operation log using a predetermined operation log interpretation method;

an associated operation log presentation unit operable to
30   present the associated operation log to the user based on an interpretation result;

a cooperating operation details determination unit operable

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to determine cooperating operation details for another device using a predetermined log processing method based on the presented associated operation log;

a cooperating operation details transmission unit operable to transmit the determined cooperating operation details to a corresponding device; and

a cooperating operation details reception unit operable to receive the cooperating operation details from another device.

2.   The operation log cooperation utilizing device according to Claim 1,

wherein the predetermined attribute includes at least one combination among a date and time identifier, a device identifier, an operation identifier, a content identifier, an application identifier, a service identifier and a user identifier.

3.   The operation log cooperation utilizing apparatus according to Claim 1,

wherein the operation log which is in the predetermined relation to the received current operation log is an operation log whose accumulated time is within a predetermined time range.

4.   The operation log cooperation utilizing device according to Claim 1,

wherein in the predetermined operation log interpretation method, an association degree of a device and a device operation is calculated, the device and the device operation being associated with the user's current situation, and

said associated operation log presentation unit is operable to present the user with the associated operation log based on the association degree.

5. The operation log cooperation utilizing device according to Claim 1,

wherein in the predetermined operation log interpretation method, the devices are ranked based on an operation frequency, and

said associated operation log presentation unit presents the user with the associated operation log based on the rank.

6. The operation log cooperation utilizing device according to Claim 1,

wherein in the predetermined operation log interpretation method, logs are grouped based on an appearance frequency of an attribute value of the each predetermined attribute, and

said associated operation log presentation unit presents the user with the associated operation log based on the grouping.

7. The operation log cooperation utilizing device according to Claim 6,

wherein the associated operation log is presented to the user in an appearance frequency order of the attribute value.

8. The operation log cooperation utilizing device according to Claim 1,

wherein in the predetermined log processing method, the presented log per se is selected.

9. The operation log cooperation utilizing device according to Claim 1,

wherein in the predetermined log processing method, an attribute value of the selected log is updated.

10. The operation log cooperation utilizing device according to

Claim 1,

wherein in the predetermined log processing method, a plurality of attribute values are combined.

11. The operation log cooperation utilizing device according to Claim 1, further comprising

a cooperating operation details accumulation management unit operable to accumulate and manage cooperating operation details for another device determined by the user along with a current operation log,

wherein said associated operation log presentation unit is operable to present cooperating operation details determined by the user in the past along with the associated operation log from another device.

12. The operation log cooperation utilizing device according to Claim 1, further comprising

a cooperating operation details prediction unit operable to predict user's next cooperating operation details based on (i) at least one of the associated operation log received from another device and the cooperating operation details accumulated in said cooperating operation details accumulation management unit and (ii) a current operation log.

13. The operation log cooperation utilizing device according to Claim 12,

wherein in the prediction by said cooperating operation details prediction unit, (i) the associated operation log received from another device and the cooperating operation details accumulated in said cooperating operation details accumulation management unit are grouped based on a predetermined attribute, and (ii) different attribute values between the grouped associated

operation log and a current operation log are replaced.

14. The operation log cooperation utilizing device according to Claim 1, further comprising

5   a device status detection unit operable to detect a device status in a predetermined timing;

a device status accumulation management unit operable to accumulate and manage device status information regarding the detected status;

10   a status information transmission unit operable to transmit the device status information to another device; and

a device status information reception unit operable to receive the device status information transmitted from another device,

wherein said associated operation log extraction unit
15 operates using a reception of the device status information as a trigger.

15. The operation log cooperation utilizing device according to Claim 1,

20   wherein the device status information is transmitted when the device status changes.

16. The operation log cooperation utilizing device according to Claim 1, further comprising a device dependency relation setting
25 unit operable for a device whose hardware resource is limited to request a device whose hardware resource is ample to accumulate an operation log and substitutively process a cooperating operation log.

30 17. An operation log cooperation utilizing method for allowing a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said method comprising the

following steps of:

detecting a user's operation on a device;

accumulating and managing the detected operation with a predetermined attribute as an operation log;

5 transmitting the current operation log as a current operation log to another device, the current operation log being accumulated when a user's operation is detected;

receiving the current operation log transmitted from another device;

10 extracting the operation log as an associated operation log from the operation log accumulated in said step of accumulating and managing the operation log, the operation log being in a predetermined relation to the received current operation log;

transmitting the extracted associated operation log to 15 another device;

receiving the associated operation log transmitted from another device;

interpreting the received associated operation log using a predetermined operation log interpretation method;

20 presenting the associated operation log to the user based on an interpretation result;

determining cooperating operation details for another device using a predetermined log processing method based on the presented associated operation log;

25 transmitting the determined cooperating operation details to a corresponding device; and

receiving the cooperating operation details from another device.

30 18. A program for a device which allows a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, causing a computer to execute the steps included in the

operation log cooperation utilizing method according to Claim 17.

19.   An operation log cooperation utilizing device which allows a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, the operation log cooperation utilizing device comprising:

a device operation detection unit operable to detect a user's operation on a device;

an operation log accumulation management unit operable to accumulate and manage the detected operation along with a predetermined attribute as an operation log;

a current operation log transmission unit operable to transmit the current operation log as a current operation log to another device, the current operation log being accumulated when a user's operation is detected;

an associated operation log reception unit operable to receive, from another device, an associated operation log which is in a predetermined relation to the transmitted current operation log;

an associated operation log interpretation unit operable to interpret the received associated operation log using a predetermined operation log interpretation method;

an associated operation log presentation unit operable to present the associated operation log to the user based on an interpretation result;

a cooperating operation details determination unit operable to determine cooperating operation details for another device using a predetermined log processing method based on the presented associated operation log; and

a cooperating operation details transmission unit operable to transmit the determined cooperating operation details to a corresponding device.

20. An operation log cooperation utilizing method for allowing a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said operation log cooperation utilizing method comprising the following steps of:

5   detecting a user's operation on a device;

accumulating and managing the detected operation along with a predetermined attribute as an operation log;

transmitting the current operation log as a current operation log to another device, the current operation log being accumulated

10   when a user's operation is detected;

receiving, from another device, an associated operation log which is in a predetermined relation to the transmitted current operation log;

interpreting the received associated operation log using a

15   predetermined operation log interpretation method;

presenting the associated operation log to the user based on an interpretation result;

determining cooperating operation details for another device using a predetermined log processing method based on the

20   presented associated operation log; and

transmitting the determined cooperating operation details to a corresponding device.

21. A program for a device which allows a plurality of devices to

25   cooperatively use user's operation logs accumulated in the plurality of devices, causing a computer to execute the steps included in the operation log cooperation utilizing method according to Claim 20.

22. An operation log cooperation utilizing apparatus which allows

30   a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said operation log cooperation utilizing device comprising:

a device operation detection unit operable to detect a user's operation on a device;

an operation log accumulation management unit operable to accumulate and manage the detected operation along with a predetermined attribute as an operation log;

a current operation log reception unit operable to receive the current operation log transmitted from another device;

an associated operation log extraction unit operable to extract an operation log as an associated operation log from said operation log accumulation management unit, the operation log being in a predetermined relation to a received current operation log;

an associated operation log transmission unit operable to transmit the extracted associated operation log to another device; and

a cooperating operation details reception unit operable to receive, from another device, cooperating operation details determined based on the transmitted associated operation log.

23. An operation log cooperation utilizing method for allowing a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said operation log cooperation utilizing method comprising the following steps of:

detecting a user's operation on a device;

accumulating and managing the detected operation along with a predetermined attribute as an operation log;

receiving, as a current operation log, an operation log transmitted from another device;

extracting an operation log as an associated operation log from the operation log accumulated in said step of accumulating and managing the operation log, the operation log being in a predetermined relation to the received current operation log;

transmitting the extracted associated operation log to another device; and

receiving, from another device, cooperating operation details determined based on the transmitted associated operation log.

24. A program for a device which allows a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said program causing a computer to execute the steps included in the operation log cooperation utilizing method according to Claim 23.

25. An operation log cooperation utilizing device which allows a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, the operation log cooperation utilizing device comprising:

a device operation detection unit operable to detect a user's operation on a device;

an operation log accumulation management unit operable to accumulate and manage the detected operation along with a predetermined attribute as an operation log;

a current operation log transmission unit operable to transmit the current operation log as a current operation log to another device, the current operation log being accumulated when a user's operation is detected;

an associated operation log reception unit operable to receive an associated operation log transmitted from another device;

an associated operation log interpretation unit operable to interpret the received associated operation log using a predetermined operation log interpretation method;

a cooperating operation details determination unit operable to determine cooperating operation details for another device using a predetermined log processing method based on the interpreted

associated operation log; and

       a cooperating operation details transmission unit operable to transmit the determined cooperating operation details to a corresponding device.

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26.   An operation log cooperation utilizing method for allowing a plurality of devices to cooperatively use user's operation logs accumulated in the plurality of devices, said operation log cooperation utilizing method comprising the following steps of:

10   detecting a user's operation on a device;

       accumulating and managing the detected operation with a predetermined attribute as an operation log;

       transmitting the current operation log as a current operation log to another device, the current operation log being accumulated

15 when a user's operation is detected;

       receiving an associated operation log transmitted from another device, the associated operation log being in a predetermined relation to the transmitted current operation log;

       interpreting the received associated operation log using a

20 predetermined operation log interpretation method;

       determining cooperating operation details for another device using a predetermined log processing method based on the interpreted associated operation log; and

       transmitting the determined cooperating operation details to

25 a corresponding device.